REMARKS

The Office Action mailed February 23, 1998, has been carefully considered.

In the Office Action, the Examiner rejected claims 31-33 under 35 U. S. C. §102(b) as being anticipated by M. Betz, "Interoperable objects: laying the foundation for distributed object computing" (hereinafter "Betz"), claims 1, 3, 4, 7-11, 13, 14, 17-21, 23, 34, and 27-30 under 35 U. S. C. §102(b) as being anticipated by W. Rosenberry, et al., Understanding DCE, chapters 1-3 and 6 (hereinafter "Rosenberry"), and claims 2, 5, 6, 12, 15, 16, 22, 25 and 26 under 35 U. S. C. §103 as being obvious over Rosenberry in view of J. Mitchell, et al., "An overview of the Spring System," (hereinafter Mitchell. No claims have been allowed.

In this amendment, Applicants are forwarding a Letter to Chief Draftsman with formal drawings for this application. In the formal drawings, the figure numbers for FIGs. 2 through 2(Cont. B) have been changed to FIGs. 2A through 2C, respectively, and the figure numbers for FIGs. 3 and 3(Cont) have been changed to FIGs. 3A and 3B, respectively. In addition, a typographical error in FIG. 2B (originally filed as FIG. 2(Cont. A)) has been corrected to delete the word "IS" from line 3 of step 110. Since the figure numbers, the specification is being amended herein accordingly.

Applicants respectfully traverse the rejections under 35 U. S. C. §102(b) and 35 U. S. C. §103. Addressing first claim 1, that claim is directed to a stub retrieval and loading subsystem for use in connection with a remote method invocation system. The stub retrieval and loading subsystem controls the retrieval and loading of a stub for a remote method into an execution environment to facilitate invocation of the remote method by a program executing in the execution environment, the stub retrieval subsystem comprises a stub retriever and a stub loader. The stub retriever initiates the retrieval of the stub. The stub loader, when the stub is received by the stub retriever, loads the stub into the execution environment, thereby to make the stub available for use in remote invocation of the remote method.

Raspberry describes a distributed computing environment (DCE) which can be provided by a number of interconnected computer systems. In particular connection with claim 1, and as specifically cited by the Examiner, section 3.1.2 describes the use of a remote procedure call (RPC), in which a "client" operating in one process can, by use of a call to stub code provided in that process, initiate processing by a "server" operating in another process, which may be operating in a different computer system. As described in section 3.1.2, the stub code takes the place of local procedures which the client is expecting, and essentially packages the call, sends it using an appropriate communications methodology to the other process. The server processes the request and generates results, which are sent back to the stub code. The stub code, in turn, receives the results from the server and unpackages them and provides them to the client.

While Raspberry describes stub code and its use in connection with an RPC, Applicants respectfully submit that it does not suggest the invention recited in claim 1. The invention recited in claim 1 is directed to an arrangement in which stub code, which does not initially form part of the execution environment (for example, a process) for a client, is retrieved and loaded into the execution environment. In Raspberry, there is no suggestion of initiating the retrieval of stub code or of loading the retrieved stub code into an execution environment after the stub code has been received, both of which are called for in claim 1. Raspberry at most suggests that stub code is provided as part of the process when the process is created. Accordingly, Applicants respectfully submit that Raspberry neither teaches nor suggests the arrangement recited in claim 1.

Applicants have reviewed the other references and submit that they, whether considered individually or in combination, also neither teach nor suggest the invention recited in claim 1.

Applicants further submit that independent method claim 11 and independent computer program product claim 21 also distinguish over Raspberry for the reasons set forth above in connection with claim 1. Claim 11 is directed to a method comprising steps along the lines of those performed by the apparatus recited in claim 1. Claim 21 is directed to a computer program product with code devices for enabling a computer to perform operations along the lines of those performed by the apparatus recited in claim 1. Applicants further submit that claims 2-10, 12-20 and 22-30 are allowable for depending from allowable independent claims.

Applicants further submit that claims 31-33 patentably distinguish over Betz. Claim 31 is directed to a stub retrieval and loading subsystem for use in connection with a remote method invocation system. The stub retrieval and loading subsystem controls the retrieval and loading of a stub for a remote method into an execution environment to facilitate invocation of the remote method by a program executing in the execution environment. The stub retrieval subsystem comprises a computer and a control arrangement for controlling the computer. The control arrangement is recited as comprising a stub retrieval module and a stub loader module. The stub retrieval module controls the computer to initiate a retrieval of the stub. The stub loader module controls the computer to, when the stub is received in response to the stub retrieval module, load the stub into the execution environment, thereby to make the stub available for use in remote invocation of the remote method.

Claim 32 is directed to a control arrangement along the lines of that recited in claim 31.

Finally, claim 33 is directed to a system for distributing code stored on a computer readable medium and executable by a computer. The code includes a plurality of modules each configured to control the computer to facilitate the retrieval and loading of a stub for a remote method into an execution environment to facilitate invocation of the remote method by a program executing in said execution environment. The system is recited as including a stub retrieval module and a stub loader module along the line of those directed in claim 33.

Betz describes the use of "inter-operable" objects in a computer, which allows a process in one address space to request the services of an object in another address space, or which allows processes in separate address spaces share an object in a third address space (see the second full paragraph on page 4 of the copy of Betz provided with the Office Action). Betz describes a number of inter-operable object models, which have been proposed or used in products provided by a number of vendors. However as with Raspberry, there is no suggestion in Betz of initiating the retrieval of stub code or of loading the retrieved stub code into an execution environment after the stub code has been received, both of which are called for in claims 31-33. Accordingly, Applicants respectfully submit that Betz neither teaches nor suggests the arrangement recited in claim 1.

Applicants have also reviewed the other references cited in the Office Action, and respectfully submit that the claims patentably distinguish thereover.

In view of the above, Applicants respectfully submit that the claims patentably distinguish over the references.

It is believed that this application is allowable, and a notice of allowability is respectfully solicited.

Respectfully submitted,

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